Wastewater and Plumbing Control Program
Policy Regarding Replacement System Variances in Close Proximity to Waterbodies/Courses and/or Wells (Includes Removal of Overboard Discharges)

Background:

The effects of subsurface wastewater disposal systems on waterbodies/courses and groundwater are addressed in the Subsurface Wastewater Disposal Rules (Rules) by requiring certain setbacks, loading rates and vertical separation distances.

The performance of a system is dependant upon the soil type, slope, depth to limiting factor(s) and bedrock, biological loading rate, lateral loading rate, soil conditions down gradient of the disposal area, location of fractures/fissures in bedrock, etc. The performance of a system can be improved by additional treatment of the wastewater, separation of wastewater (with black waste disposed by an alternative method), increasing vertical separation distance (to provide increased treatment), extending fill (to increase the footprint), and decreasing the hydraulic loading (water conservation).

The safety of a potable water supply well can be better assured by increasing the amount of casing, regular sampling of water supply, increased treatment of the wastewater or relocation of the well.

Issue:

There are a vast number of properties within the shoreland zone of major waterbodies/courses with overboard discharge (OBD) or subsurface wastewater disposal systems (systems). The Maine Department of Environmental Protection (MDEP) is moving toward removing all, or as many as possible, of the OBDs from Maine's waters. Some of the systems are old and/or non-conforming and will need to be replaced in the not so distant future. Many of these lots are small and may have drinking water wells and/or soil or site conditions that restrict the available suitable area for locating replacement systems.

Analysis:

The Division of Health Engineering (DHE) acknowledges the existence of these properties and the potential difficulties that may be incurred in siting replacement systems. The Rules allow for variances to the requirements but do not address specific parameters to protect the waterbodies/courses and/or wells from effluent intrusion from the systems.

Administratively, some issues can be addressed by deed covenants and/or easements. However, there are other issues that cannot be addressed by these measures.

Policy:

Therefore, DHE's Wastewater and Plumbing Control Program has developed the following criteria to assist the Licensed Site Evaluators with designing replacement systems and the property owners with applying for Replacement System Variances, when necessary.

1. **Waterbodies:** Variances to the Rules' setback of 100 feet to a major waterbody/course will be considered under the following criteria:

    A. If the disposal area is at least 60 feet from the waterbody/course, a variance may be approved by the LPI and does not require DHE review.

    B. If the disposal area is less than 60 feet from the waterbody/course, a variance must be reviewed by DHE using the following criteria:

PLEASE NOTE – For the purposes of this policy, the term **"suitable soil"** means mineral soil of adequate unsaturated depth to assure that the effluent will not surface within the specified distance. Since the lateral loading rate may vary with the design, and the capacity of the site will vary with slope, unsaturated depth, and soil type, the site evaluator must determine the extent of suitable soil, but there must be at least 7 inches of unsaturated soil.

B.1 If there is **40 feet or more of suitable soil** between the disposal area and the waterbody/course, DHS may approve the variance without requiring additional engineering.

B.2 If there is **20 feet to 40 feet of suitable soil** between the disposal area and the waterbody/course, DHE may approve the variance if:

B.2.a The system handles gray water only and utilizes a holding tank or an alternative toilet for black waste.

- Or –

B.2.b There is an existing vegetated buffer at least 10 feet wide between the system and the waterbody/course and the buffer is undisturbed by the construction of the system, and the vertical separation between the bottom of the disposal area and the most limiting factor is at least 150% of the required separation distance per Table 600.2 (i.e. 18" vs 12", etc.).

- Or –

B.2.d The system includes sufficient additional treatment so that the effluent reaching the disposal area has combined BOD5 and Total Suspended Solids reduced to 30 mg/l or less per Table 603.1.

B.3 If there is **less than 20 feet of suitable soil** between the system and the waterbody/course, the site is considered unacceptable for subsurface wastewater disposal. The only option offered under the Rules is a holding tank.

2. Wells: Variances to the Rules required setback of 100 feet to a well shall meet the requirements of Chapter 7. If the site cannot meet the variance setback requirements to a well, the site is considered unacceptable and the only option offered under the Rules is a holding tank, subject to the setback requirements for holding tanks.

3. Criteria Not Met: If a site cannot meet any of the foregoing criteria, the Licensed Site Evaluator may propose a system which includes sufficient additional design enhancements to provide an equivalent protection of public health and safety. Note: This does not apply to any site that does not have at least 20 feet of suitable soil with vegetated cover between the proposed disposal area and the normal high water mark of the waterbody/course.

4. Minimum Lot Size Law: The Minimum Lot Size Law (MLSL), Title 12, section 4807, requires 20,000 square feet of area for single-family residences using subsurface wastewater disposal systems and 8,000 square feet/bedroom for multi-family structures.

The MLSL exempts structures that used subsurface wastewater disposal systems on or before October 3, 1973, and also exempts, for single-family residential purposes, non-conforming lots of record existing prior to January 1, 1970. The use of non-conforming lots will require demonstration of compliance with one of the aforementioned exemptions or a waiver to the MLSL.

ADDITIONAL CONSIDERATIONS

Variance Reviews: These criteria establish general guidance for design and review of system with regard to a specific parameter. All variances are subject to review and will be approved when appropriate. There could be a combination of requested variances, the sum of which would make a site unapprovable.

Sanitary Surveys: Upon approval of a site, a sanitary survey must be undertaken to inspect the condition of existing components which will be incorporated into the new system, and to eliminate additional hydraulic loading from floor drains, perimeter drains, sump pumps, downspouts, infiltration, and to confirm the number of bedrooms in the dwelling.

Internal Plumbing: The use of low flow toilets and other water saving devices may be required.

Construction Supervision: It is crucial that any approved system design be installed with minimal disturbance of the site. To assure this, a competent inspector, either the designer or a similar professional retained by the town or the system owner, must oversee the construction.

Warranty: The Department of Environmental Protection, the agency funding systems to remove OBDs, may enquire about warranties for the operation of the systems, either by the Licensed Site Evaluator/Contractor or through some form of insurance by a third party.

_____

Russell Martin, Director
Wastewater and Plumbing Control Program
Division of Health Engineering

Dated: _____